

REMARKS

Applicant and the undersigned have carefully reviewed the first Office Action of Oct. 5, 2005 in the subject U.S. patent application, together with the prior art cited and relied on by the Examiner in the rejections of the claims. In response, the claims of the application have been amended. It is believed that the claims now pending in the subject application are patentable over the prior art cited and relied on by the Examiner. Reexamination and reconsideration of the application, and allowance of the claims is respectfully requested.

As disclosed in the specification, as depicted in the drawings, and as recited in the claims, the subject invention is directed to a stitch tab scrap stripper. When a so-called stitch tab, generally at 28 in Fig. 1, is formed in a box blank 21, as that box blank passes between rotary members of a paperboard box slotter-printer, pieces of scrap 29 and 30, as are also shown in Fig. 1, are generated. These pieces of scrap need to be separated from the box blanks and ejected from the slotting machine. If this is not done, the scrap pieces disrupt the stack of the box blanks that will be formed after they pass through the printer-slotter. The stitch tab scraps are ejected from the machine by the use of a stitch tab scrap stripper which is securable to a die block that is positionable on a slotter roller, generally at 30, in a slotting section 27 of the printer-slotter. These die blocks 54 and 56 respectively, are then attached to an outer slotter roller 52, as may be seen in Fig. 2. Die block 54 is a leading stitch tab die cutting block whereas die block 56 is a trailing stitch tab die cutting block. Die cutting blocks are generally known in the art.

Each die block carries a pivot arm, such as the one shown at 102 in Fig. 4. The pivot arm is pivotably secured to the die block for pivotal movement about a pivot axis 108. One end of the pivot arm is a stripper segment 104 and the other end of the pivot

arm is a biasing segment 106. The biasing segment 106 is provided with a resilient means, such as a spring 134, whose purpose is to oppose movement of the stripper segment toward the body of the die block.

When the slotter roller rotates and slots and scores a box blank, a knife 9 that is held against a flank of the slotter roller by the die block, cuts an elongated slit in the box blank, and extending in the direction of box blank travel. A tab cutter knife 80 is used to sever the newly formed stitch tab scrap from the box blank. Once the scrap has been formed, it is ejected by the stripper segment of the pivot arm. As the slotter roller rotates in cooperation with an anvil roller, the stripper segment is forced to move into engagement with the die body because of the passage of the die body and the scrap stripper through the nip defined by the slotter roller and the cooperating anvil roller. As soon as the stripper segment of the scrap stripper exits from that nip, the biasing means will move the stripper segment away from the die block with sufficient speed and force to properly eject the stitch tab scrap.

The above discussion is directed to the leading end stitch tab scrap stripper, generally at 54. Essentially the same structure and the same principle of operation characterize the trailing end stitch tab scrap stripper. The primary difference is that the stripper segment is now before the biasing segment, in the direction of the rotation of the slotter roller. The biasing means in the trailing end stitch tab scrap stripper acts to bias this stripper segment into engagement with the die block. A fulcrum block is situated on the outer face of the biasing segment, as seen in Figs. 6 and 8. The fulcrum block moves the stripper segment away from the body of the die block as it passes through the nip defined by the slotter roller and the anvil roller.

In the first Office Action of October 5, 2005, claims 1-10, 12, 14-17 and 19 were rejected under 35USC102(b) as being anticipated by U.S. Patent No. 1,108,898 to

Garratt. Claims 11, 13, 18 and 20 were objected to as depending from a rejected main claim. They were indicated as being allowable, if placed in independent form.

Initially, the indication of the allowability of claims 11, 13, 18 and 20 is noted with appreciation. In response, claims 13, 18 and 20 have been presented in independent form and including the limitations of any intervening claims. The number of independent claims now in the application is 5. It is requested that the additional claim fee of \$200 (small entity), for the two independent claims more than the three which were originally paid for, be charged to deposit account no. 10-1213 of the undersigned.

Claims 1 and 17, the two independent claims rejected in the first Office Action as being anticipated by the Garratt reference, have been amended to more clearly patentably define the subject invention. For the reasons to be set forth subsequently, it is believed that claims 1 and 17, as filed, and even more clearly as amended are neither anticipated by, nor rendered obvious to one of skill in the art over the Garratt reference.

Referring now to the prior art Garratt patent, there is disclosed a device which is usable to eject a press-formed metal piece from a sheet metal die press. As such, it is not in the same area of endeavor or in even a remotely similar area of endeavor to the subject invention. While it is realized that a preamble is not a positive limitation of the claim, it does define the environment in which the invention is being used. The subject invention is used to strip small tabs or scraps from a paperboard box blank as that blank is printed, scored and slotted.

In the Garratt device, an ejector 15, which is essentially a sweep arm, is caused to move by the pivotal movement of a carrier 26 which has a beveled edge 29, as seen most clearly in Fig. 4. When the press dies close, in a reciprocatory manner, a

downwardly extending arm 5 engages a bearing 36 at the top of a plunger 30. That plunger has a lower cam face 33 which engages the carrier beveled edge 29. As the plunger 30 is pressed down by the arm 5 in response to the die 2 being forced into the work support 3, the carrier 26 operates through a very elaborate, and somewhat Rube Goldberg-type mechanism to cause the ejector 15 to sweep across the surface of the work support 3 as the die 2 is being raised up out of engagement with the work support. This movement of the ejector 15 across the surface of the work support 3, as depicted schematically in Fig. 3, pushes a press formed metal stamping off the work support.

With respect to claims 1 and 17, it was asserted in the Office Action that Garratt shows a pivot arm having a stripping segment 15 and 16, a biasing segment 23 and a pivot shaft 17 intermediate the two, as well as attached to a die block 6. In fact, Garratt discloses an ejector 15 which is attached to an ejector mechanism 15 that is pivotable at one end about a pivot 17. The asserted biasing segment 23 is an actuator ear 23 which is part of an actuator 18 that is a separate element of the complex mechanism. That actuator 18 is also pivotable about shaft 17 but it is not a part of the ejector 15 and 16. Neither the ejector 15, its ejector mechanism 16 or the actuator 18 is attached to a die block. The element 6, which is asserted in the Office Action as being a die block is, in fact, a housing 6 in which the ejector mechanism is supported. As is clearly depicted in Figs. 1, 2 and 3, the die 2 which deforms the sheet metal does so by engagement with a blank on the work support 3. Element 6 is situated to one side of the die 2 and the work support 3. It is not a die block and does not function as a die block. It is not part of the die assembly.

The biasing means 24 and 25 in the Garratt structure is a coil spring. Spring 24 extends from an ear 23 of the actuator 18 to a pivot 25. As discussed above, while the actuator 18 is useable to move the ejector 15 and the ejector mechanism 16, it is not

part of the ejector 15.

With respect to claim 17, the subject invention is directed to a stitch tab which is adopted for use in stripping stitch tab scraps from a box blank in a rotary box blank slotter. The die block that includes the pivot arm and the cutting knife is securable to a rotary male slotter head. The specific structure usable to accomplish such a securement is not of patentable significance. The fact that the pivot arm, which includes the stripper segment and the bearing segment, is attached to a die block which is securable to a male slotter head is of patentable significance. The patent to Garratt does not show or suggest any apparatus which is similar in structure or in function. Garratt does not use a male slotter head. In Garratt, the sole purpose of the die 2 and the work support 3 is to cooperate to deform a sheet of metal in a press bending operation. Garratt does not lead, suggest or even contemplate the use of a male slotter head whose purpose, as is discussed in detail in the subject application, is to cut slots in a paperboard box blank. This slot formation is not a die press type of operation. Instead, it is accomplished by mounting a knife blade 94 on the slotter roller and by using that knife blade 94, in cooperation with an anvil roller, to cut a slot in a paperboard box blank as that blank passes through a nip defined by the slotter roller and the anvil roller. Garratt clearly does not have any such structure or function. Accordingly, Garratt clearly cannot anticipate the language of claim 17, as filed.

Both claims 1 and 17 have been amended. It is believed that these claims, as amended, are even more clearly patentable over the Garratt reference. Both claims 1 and 17 recite that the pivot shaft is pivotably securing the pivot arm to the stitch tab die block. The pivot connection allows the pivot arm to move in response to rotation of the slotter roller to which the die block is attachable. Claims 1 and 17 further recite the biasing means that engages the biasing segment and that exert a biasing force on the

pivot arm. Since Garratt does not show, or suggest these structural features, it is believed that claims 1 and 17, as filed, and even more clearly as amended are patentable over Garratt.

All of the currently pending dependent claims depend, either directly or indirectly from one or the other of believed allowable claims 1 and 17. It is thus believed that these claims are also allowable. Further, these dependent claims recite structures and functions which are not shown or suggested in Garratt.

The several additional prior art references cited in the Office Action of Oct. 5, 2005 were not relied on in the rejections of the claims. Since they were not applied in the rejections, no discussion thereof is believed to be required.

The subject invention, in its commercial embodiment, has received wide acceptance and success in the market. To date approximately 322 pairs of stitch tab scrap strippers made in accordance with the present invention have been sold. These are being used in 126 plants to effectively solve problems not solved by prior devices. The sales of these 322 units have generated revenue of over \$425,000. It is quite clear that the subject invention is a commercial success and that it has found significant approval in the industry to which it is directed. Enclosed with this Amendment is a copy of a two page advertising brochure which depicts the tab strippers in action.

SUMMARY

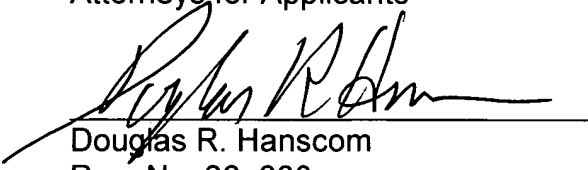
Claims 1, 6, 13, 17, 18 and 20 have been amended. Claims 2-5, 7-12, 14-16 and 19 have been carried forward. The additional claim fee of \$200 is to be charged to the deposit account no. 10-1213 of the undersigned.

It is believed that all of the claims now pending in the application are patentable over the prior art cited and relied on. Allowance of the claims, and passage of the application to issue is respectfully requested.

Respectfully submitted,

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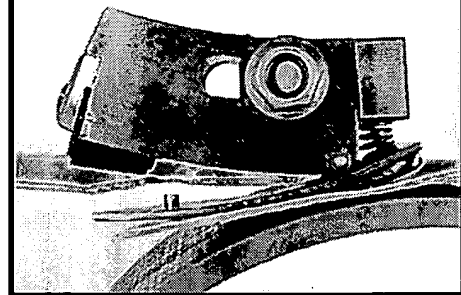
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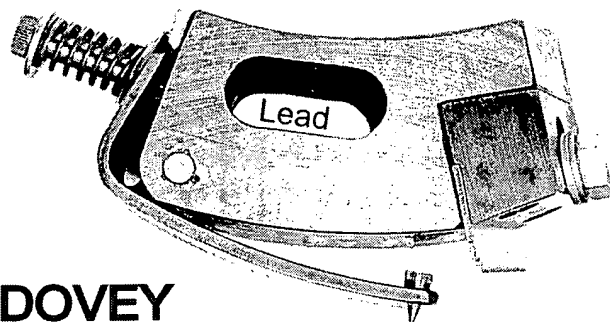
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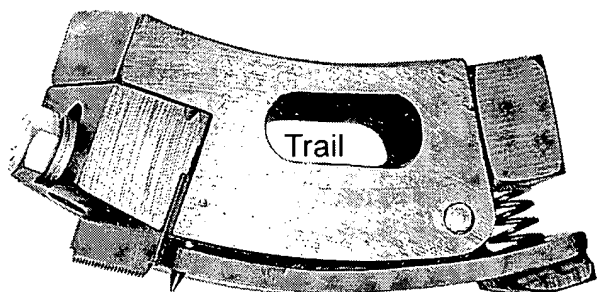
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